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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,873	07/16/2003	Harold E. Mattice	IGT1P096/P-824	1742
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BEYER WEAVER LLP			EXAMINER	
P.O. BOX 70250			BANTA, TRAVIS R	
OAKLAND, CA 94612-0250				
			ART UNIT	PAPER NUMBER
			3714	
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			05/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/621,873	MATTICE ET AL.	
	Examiner	Art Unit	
	Travis R. Banta	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Currently, claims 1-20 are pending. Claims 1-6, 13, and 19 have been amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeMay et al. (US 7,108,605).

Regarding claim 1, LeMay et al. discloses a method of authenticating configuration data within a gaming machine with respect to a gaming machine boot process (see figure 4 and explanation column 7 lines 13-19). A CPU is used in the gaming machine (see column 7 line 4 microprocessor 104). A volatile programmable electronic device for use in conjunction with the gaming machine is provided (see column 6 lines 20-45 - disclosed are RAMS, EPROMs, FPGAs, semiconductor memories, magnetic memories, and optical memories). A configurator is provided (see column 8 line 21-22 – called an authenticator). The authenticator is provided with a read only configuration file (see column 7 line 50 – a signature portion to authenticate the extended BIOS EPROM). A read only custodial file is used in the gaming machine (see column 7 lines 26-27. The

extended BIOS EPROM is stored in a compressed format to be compared against the Main BIOS EPROM to ensure it is from a trusted source.) The Examiner understands compressed data and uncompressed data to be identical. That is, the data itself is identical though stored differently. Hence, the BIOS EPROM and the Main BIOS EPROM share a substantial identical portion of the configuration file. The custodial file is stored in the extended BIOS EPROM which is a separate location from the Main BIOS EPROM. The game is booted after a shut down phase, the configuration file is transferred from the authenticator (configurator) to the BIOS EPROM (see Column 8 lines 1-5). The BIOS EPROM is then configured with the configuration file to prepare for comparison. The data is compared to ensure it is from a trusted source as described above using at least a representative portion of data from the custodial file. The machine confirms the configuration file has been successfully compared to sufficient level of satisfaction and only allows the game to continue if the confirmation is successful (see column 11 lines 28-38).

Lemay et al. fails to disclose holding the operating contents of the volatile programmable device as substantially empty upon a shut down phase of a gaming machine. One of ordinary skill in the art would recognize that many types of memory are emptied when power is not provided to the memory. One of ordinary skill would also recognize that emptying the memory before comparison of configuration files would be advantageous to maintain a clean memory and therefore reduce errors in the configuration checks. It would therefore be obvious to one of ordinary skill in the art to maintain the memory (a volatile

programmable electronic device) as empty upon a shutdown of a machine to reduce errors in file comparison when the machine was again turned on.

Regarding claim 2, Lemay et al. discloses an authenticator which the examiner understands to be the same as a configurator that comprises a memory unit (see column 7 line 45-50).

Regarding claims 3 and 4, Lemay et al. discloses a configuration that comprises a standard read only memory. In this case, it is an EPROM. Regarding the use of EEPROMs, one of ordinary skill in the art would recognize that EEPROMs are very similar to EPROMs but have an electrically erasable capability. One of ordinary skill would recognize this feature makes it possible to reload information on the chip while it is still on board in the machine. This feature makes it much easier to update chip information. It would therefore be obvious to one of ordinary skill motivated by a desire to update game information, to incorporate the use of EEPROMs in the gaming machine to facilitate the ease of updating information.

Regarding claim 5, Lemay et al discloses a volatile programmable electronic device of a FPGA or field programmable gate array (see column 6 lines 20-45).

Regarding claim 6, Lemay et al. discloses a simple programmable logic device such as an EPROM.

Regarding claim 7, Lemay et al. discloses a single apparatus containing a CPU, a volatile programmable electronic device, and the configurator (authenticator) (see figure 3).

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Regarding claim 8, Lemay et al. discloses the comparison step is performed by the central processing unit (see column 6 lines 45-48).

Regarding claim 9, Lemay et al. discloses a CPU containing the custodial file (see rejection of claim 1).

Regarding claim 10, Lemay et al discloses determining if the configuration file that has been compared is correct. The Examiner understands "correct" to be equivalent to a sufficient level of satisfaction (see column 11 lines 28-38).

Regarding claim 11, Lemay et al. discloses the confirming step occurring prior to the transferring step (see column 8 lines 1-5).

Regarding claim 12, Lemay et al. discloses the configurator (authenticator) to be located in the CPU (see column 6 lines 25-35).

Regarding claim 13, Lemay et al. discloses a microprocessor based gaming machine comprising a CPU, a volatile programmable electronic device (EPROM, RAM, flash, FPGA, optical/magnetic) (column 6 lines 25-35), and a configurator (Lemay discloses an "authenticator" but the Examiner holds the configurator and authenticator to be equivalent). Lemay et al similarly discloses a read only custodial file is used in the gaming machine (see column 7 lines 26-27. The extended BIOS EPROM is stored in a compressed format to be compared against the Main BIOS EPROM to ensure it is from a trusted source.) The Examiner understands compressed data and uncompressed data to be identical. That is, the data itself is identical though stored differently. Hence, the BIOS EPROM and the Main BIOS EPROM share a substantial identical portion of the configuration file. The custodial file is stored in the extended BIOS EPROM

which is a separate location from the Main BIOS EPROM –in the microprocessor based gaming machine. A comparator is provided (see column 8 line 21-22 – called an authenticator). The authenticator is provided with a read only configuration file (see column 7 line 50 – a signature portion to authenticate the extended BIOS EPROM).

Lemay et al. does not specifically disclose providing a signal to the CPU regarding the results of the comparison. However, one of ordinary skill would recognize that since an indication of a correct comparison is provided and that it is a necessary step in the process of booting the machine, a signal from the processor indicating a correct comparison would be necessary. It would therefore be obvious to one of ordinary skill in the art to provide a signal regarding the results of the comparison to allow the machine to boot properly with the functions and features as disclosed by Lemay et al.

Regarding claim 14, Lemay et al discloses a volatile programmable electronic device of a FPGA or field programmable gate array (see column 6 lines 20-45).

Regarding claims 15, Lemay et al. discloses a configuration that comprises a standard read only memory. In this case, it is an EPROM. Regarding the use of EEPROMs, one of ordinary skill in the art would recognize that EEPROMs are very similar to EPROMs but have an electrically erasable capability. One of ordinary skill would recognize this feature makes it possible to reload information on the chip while it is still on board in the machine. This feature makes it much easier to update chip information. It would therefore be

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obvious to one of ordinary skill motivated by a desire to update game information, to incorporate the use of EEPROMs in the gaming machine to facilitate the ease of updating information.

Regarding claim 16, Lemay et al. discloses the comparator (authenticator) to be located in the CPU (see column 6 lines 25-35).

Regarding claim 17, Lemay et al. discloses a CPU containing the custodial file (see rejection of claim 1).

Regarding claim 18, Lemay et al. discloses the configurator (authenticator) to be located in the CPU (see column 6 lines 25-35).

Regarding claim 19, LeMay et al. discloses a method of authenticating configuration data within a gaming machine with respect to a gaming machine boot process (see figure 4 and explanation column 7 lines 13-19). The game is booted after a shut down phase, the configuration file is transferred from the authenticator (configurator) to the BIOS EPROM (see Column 8 lines 1-5). The BIOS EPROM is then configured with the configuration file to prepare for comparison. The data is compared to ensure it is from a trusted source as described above using at least a representative portion of data from the custodial file. The custodial file is stored in the extended BIOS EPROM which is a separate location from the Main BIOS EPROM. The machine confirms the configuration file has been successfully compared to sufficient level of satisfaction and only allows the game to continue if the confirmation is successful (see column 11 lines 28-38).

Regarding claim 20, Lemay et al. disclose a method of authenticating data in a microprocessor based machine. A CPU, an FPGA, and an EPROM are provided (see column 6 lines 30-39). A configuration file is stored in the EPROM (see column 7 line 20. A separate custodial file is stored in a second EPROM called the Extended Bios EPROM. The two files are disclosed to be the same except one is a compressed file and thus stored differently in the device (see column 7 lines 45-50). FPGAs are disclosed to be used in place of one or more EPROMs (see column 6 lines 35-38). Lemay et al. disclose booting up the machine, and using the CPU to compare at least a representative portion of the data (all of it) between the configuration file and the custodial file. The FPGA is then configured with the configuration file.

Lemay et al fails to disclose the use of EEPROMs, holding the contents of an FPGA as substantially empty, and initiating a request to transfer a configuration file from the EEPROM to the FPGA.

Regarding the use of EEPROMs, one of ordinary skill in the art would recognize that EEPROMs are very similar to EPROMs but have an electrically erasable capability. One of ordinary skill would recognize this feature makes it possible to reload information on the chip while it is still on board in the machine. This feature makes it much easier to update chip information. It would therefore be obvious to one of ordinary skill motivated by a desire to update game information, to incorporate the use of EEPROMs in the gaming machine to facilitate the ease of updating information.

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Regarding holding the contents of an FPGA as substantially empty upon a shutdown phase of the machine, Lemay et al. fails to disclose holding the operating contents of the FPGA as substantially empty upon a shut down phase of a gaming machine. One of ordinary skill in the art would recognize that many types of memory are emptied when power is not provided to the memory. One of ordinary skill would also recognize that emptying the memory before comparison of configuration files would be advantageous to maintain a clean memory and therefore reduce errors in the configuration checks. It would therefore be obvious to one of ordinary skill in the art to maintain the memory (a volatile programmable electronic device) as empty upon a shutdown of a machine to reduce errors in file comparison when the machine was again turned on.

Regarding the initiating a request to transfer a configuration file from the EEPROM to the FPGA, Lemay et al. fails to disclose initiating a request though the configuration files are transferred. One of ordinary skill would recognize that such a request would need to be made by the processor to enable the processor to process the information in a timely, efficient, and correct manner. It would therefore be obvious to one of ordinary skill in the art at the time of the invention to instruct the processor to initiate a request to transfer the configuration file from the EPROM to the FPGA. The FPGA is disclosed to be used in place of an EPROM either the main BIOS EPROM, or the extended BIOS EPROM.

Response to Arguments

Applicant's arguments have been considered but are moot in light of the grounds of new rejection cited herein.

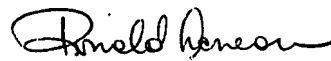
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R. Banta whose telephone number is (571) 272-1615. The examiner can normally be reached on Monday-Friday 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TB


RONALD LANEAU
PRIMARY EXAMINER

5/23/07